

[1] "True Believers: Holistic Ranching." *The Economist*, December 21, 1991. Infotrac Newsstand.

[487 Words]

Allan Savory, a Rhodesian (now Zimbabwe) native, is a biologist, farmer, and environmental activist. He has dedicated the latter part of his life to reversing the effects of desertification. He believes this can be done through planned grazing and rotation of livestock, an approach that contrasts widely held beliefs regarding the causes of desertification. Savory is the winner of the 2003 Banksia International Award and 2010 Buckminster Fuller Challenge for his work in reversing desertification. He started the Savory Institute, an organization dedicated to the promotion of "Holistic Resource Management" (HRM).

The article focuses on Savory's work promoting HRM. It argues that desertification is not caused by overgrazing, but rather grazing and proper management of cattle and other livestock will reverse the effects of desertification. As the article states, "HRM is not just 'a grazing system from Africa.' It is a strange mixture of common sense and mysticism." Savory "espouses the theory that grassland actually benefits from heavy grazing by cattle, so long as the cattle soon move elsewhere, [duplicating] the effect of a herd of wild buffalo moving through the area-which is what the plants are adapted to." Here he is making the inference that mimicking natural patterns will result in a more productive, sustainable solution. Savory points out livestock must eat however, and that if left alone in one place have the potential to strip the acreage of all vegetation. The article also presents criticisms of Savory's work, mentioning the plethora of "historical and current evidence" in contrast to his research. However, Savory points out ranchers are admitting to possibly "doubling their crop in a matter of years." Better still, Savory mentions that his clients including the Bureau of Land Management, the Forest Service, the World Bank, and the U.N. do not need to be invited, that they are expressing their own interest in his work. Savory makes the poignant claim that "HRM is not merely about how to get more productivity per acre; it is a way of teaching that the traditional goals of production, eradication, preservation and problem-solving need to be replaced." This suggests a deeper meaning than simply reversing desertification, that Savory is attempting to drastically alter how environmental problems are approached in an effort to create more effective and logical solutions.

With statements such as "grassland actually benefits from heavy grazing by cattle," and "Instead of having to ask people to come to HRM workshops, Mr. Savory finds they are coming of their own accord," this article proves effective at ensuring its importance. The setup is stunning, challenging a belief held in ubiquity. Proof of the effectiveness of Savory's ideas encourages their acceptance. We see this as logical assumptions about the role of animals, married with photographic and trial-based evidence. The feel-good nature of Savory's findings in concert with the systematic disproving of a widely held belief make this work powerful, allowing Savory's work to greatly appeal to the human psyche.

- [2] Camps, Enriqueta, and Stanley L. Engerman. "World Population Growth: The Force of Recent Historical Trends." *Journal of Interdisciplinary History* 44, no. 4 (February 1, 2014): 509–26. doi:10.1162/JINH_a_00612.

[518 Words]

Enriqueta Camps and Stanley Engerman are both university professors. Camps lectures at Universitat Pompeu Fabra Barcelona (UPF) in the areas of historical demography and international economic history. Engerman lectures at the University of Rochester as a professor of economics and history. Both have authored or contributed to other papers in their respective fields; including *The rise and decline of children's labour participation levels in early stages of industrialization* (Camps) and *Slavery and Emancipation in Comparative Perspectives: A Look at Some Recent Debates* (Engerman). Camps and Engerman earned PhD's from the European University Institute and Johns Hopkins University respectively.

The article first establishes the need for concern stemming from increasing global population, quickly focusing on sub-Saharan Africa as being a particular problem. This article does so by correlating between several dependent variables and population growth in sub-Saharan Africa. These dependent variables are sorted into exogenous and endogenous variables. The authors then employ regression analysis as a tool for developing variable correlations. The result is that Camps and Engerman find female elementary education in sub-Saharan Africa of higher relevance than per-capita GDP, national population, and infant mortality, to leveling the global population.

To set the scene Camps and Engerman make the following case: "On the eve of the twenty-first century, much of the planet had undergone the transition from high to relatively low fertility, the main exceptions being the countries of sub-Saharan Africa." The authors elaborate, stating that "the population in this part of Africa is doubling every thirty years." Camps and Engerman established the concern, and more specifically the focus, with the last two arguments. They go on to comment about their regression findings, stating "Our findings reveal female education to be the most powerful variable to explain fertility diminution in poor countries." Put simply, of the variables tested female elementary education is shown to have the greatest, relevant inverse relationship to global population: Increasing years of childhood female education will result in the largest decrease in population growth in sub-Saharan Africa.

Given the nature of the presentation, this article linking education and global population is of paramount importance. The article sets up the need for focusing on global population, citing that by reaching the world's replacement level by 2050 (an optimistic endeavor), "the world population could peak at 9.1 billion people, [a figure] which most economic authorities find disconcerting." Developing the correlation between the dependent and independent variables using regression analysis is an important tool as well, one that is hard to refute. One of the most important facets of the article is its legibility. While many peer-reviewed articles can be quite dense and difficult to follow, Camps and Engerman do a masterful job at appropriately developing their ideas and conveying them to the layperson.

The utility of the article increases when considering its quote-ability. With compelling data such as “A one-year increase in women’s primary schooling causes the number of children born to fall by 0.614,” Camps and Engerman provide a great resource for the basis of action. In other words, given this article one feels obligated to act on the seemingly simple solutions which are developed.

- [3] United Nations Environment Programme (UNEP). Forest losses and gains: where do we stand? [PDF file]. UNEP Vital Forest Graphics, 10-13. Retrieved From: <http://www.unep.org/vitalforest/Report/VFG-02-Forest-losses-and-gains.pdf>

[513 Words]

Given that this paper was published by UNEP, finding an author(s) would be extremely difficult. Instead, focus will be placed on UNEP as an organization. UNEP is a part of the United Nations, an organization which promotes, legislates, and polices international cooperation. UNEP itself “coordinates environmental activities, assisting developing countries in implementing environmentally sound policies and practices.”^[1] As part of its work UNEP publishes reports similar to the one being annotated, for reference by countries, individuals, and organizational bodies. UNEP was formed in 1972, as a branch of the UN focusing on environmental issues.

This report focuses on global deforestation trends between 1990 and 2005 by examining the reported data of individual countries and continents. The data is presented primarily in graphical format, with a good amount of text to support the visuals. This UNEP report starts by developing the figure for net forest loss in the aforementioned timeframe: “In the period 1990-2000 the world is estimated to have suffered a net loss of 8.9 million hectares of forest each year, but in the period 2000-2005 this was reduced to an estimated 7.3 million hectares per year.” The report then continues by talking about the effects of deforestation. For example, “removing forests not only means the loss of this carbon carrying capacity but also frequently means that large amounts of greenhouse gas are suddenly released into the atmosphere through wood burning and clearance activities.” UNEP also includes other considerations to be. “For example, forest areas opened by the felling of timber species are likely to be colonized by pioneer tree species, thus changing the forest’s composition. It is therefore important not to focus solely on factors such as deforestation rates or net change, but to also look at changes in the characteristics, composition and health of forest ecosystems.” Finally, the report mentions the causes of deforestation, “[including] population increases leading to increases in demand for land, poverty, lack of enforceable property rights and a lack of incentives to establish proper forest management systems.”

This report is of great importance to both presentations, though it is only referenced in *How Are Population and Education Related?* As both topics directly focus on deforestation, this report helps put numbers to this environmental problem, as well as sheds light on the causes of deforestation. Interestingly, this report inadvertently supports Allan Savory’s arguments by not mentioning grazing of livestock as a cause of deforestation, and additionally reaffirms that deforestation is due, in part, to overpopulation resulting in increased demand for land.

Following the supporting evidence in this report reaffirming overpopulation as a sustainability issue, specific note should be made of the figure on page 12. This figure shows that in the US for example, a country which is approximately at its replacement level, there is a net growth in forest acreage. In sub-Saharan Africa however, where reference [2] proved population growth was of greatest concern, the rates of deforestation are some of the highest in the world. This only serves to support the evidence in reference [2] which suggests the imperative to focus on global population immediately.

References:

- [1] United Nations Environment Programme. (2014, April 24). In Wikipedia, The Free Encyclopedia. Retrieved 05:59, May 21, 2014, from http://en.wikipedia.org/w/index.php?title=United_Nations_Environment_Programme&oldid=605539248